UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,824	02/27/2004	Iraj Saniee	9-7	6962

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Lucent Technologies Inc.
Docket Administrator (Room 3J-219)
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EXAMINER
WEIDNER, TIMOTHY J

ART UNIT	PAPER NUMBER
2609	

MAIL DATE	DELIVERY MODE
07/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *3/29/04*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the determining at least one time within the recurrent cycle at which bursts need to depart in order to arrive at the receiving node within a selected timeslot as in claim 2, and the overlapping departure times as in claim 5, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required: The terms "non-receipt" and "non-received" of claim 3, lines

20 and 21.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
      obviousness or nonobviousness.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Scholefield et al. (U.S. 5,742,592, herein "Scholefield") in view of Garcia-Luna-Aceves

(U.S. 2002/0167960 A1, herein "Garcia").

Regarding claim 1, Scholefield teaches a method, comprising:

(a) at a receiving node of a communication network, receiving a request to

schedule at least one timeslot of a recurrent cycle (figure 2; "frame" is recurrent cycle)

for receipt of burst transmissions from a sending node of the network (column 4, lines

14-19; "an access request on all three timeslots ... received by the infrastructure");

(b) in response to the scheduling request, selecting at least one timeslot of the

cycle for receipt of burst transmissions (column 4, lines 27-29; "an allocation of only

these subchannels would be made"); and

(c) communicating the selected timeslot or timeslots to the sending node (column

4, lines 37-44; "send back ... separate allocation messages on each subchannel").

However, Scholefield does not teach selecting in a manner which is independent

of timeslot selections made by other nodes of the network. Garcia, which is in the same

field of endeavor, teaches selecting in a manner which is independent of timeslot

selections made by other nodes of the network (paragraph 0030; "nodes admit new

nodes for quasi-static scheduling independently of one another") for the purpose of

"allowing a new node to start using the time slots ... after it receives routing messages

from some or all of its neighbors".

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to select at least one timeslot of the cycle (Scholefield) in a manner

which is independent of timeslot selections made by other nodes of the network

(Garcia) to allow a new node to start using the time slots after it receives routing

messages from some of its neighbors.

Regarding claim 5, Garcia teaches said receiving node is one of at least a first

and a second receiving node (paragraph 0095; "different IRs ... receive"); and the first

and second receiving nodes each select at least one timeslot in which bursts are to be

received (paragraph 0092; "IRs can start using the timeslots"); and the method further

comprises, at the sending node: determining a departure time within the recurrent cycle

for bursts which are to be received at the first receiving node in the timeslot which it has

selected (paragraph 0028; "each node assigns a time slot"); assigning said departure

time to at least one burst destined for the first receiving node (paragraph 0028; "each

node assigns a time slot"); and determining a departure time within the recurrent cycle

for bursts which are to be received at the second receiving node in the timeslot which it

has selected (paragraph 0028; "each node assigns a time slot"); detecting at least one

instance of conflict in which the departure time of bursts destined for the receiving node

overlaps the departure time of bursts destined for the second receiving node (paragraph

0095; "unable to receive correctly ... because more than one of its neighbors transmits

in the same time slot"); and reassigning the assigned departure time to at least one

burst destined for the second receiving node, such that said departure time is no longer

available to bursts destined for the first receiving node (paragraph 0031; "all nodes ...

assign the same time slot to the same node ID") for the purpose of "reserving time slots

to IRs for collision-free broadcast transmissions over a common broadcast channel in

such a way that an upper bound is ensured for the time elapsed between two time slots

assigned to a given IR in the system" (paragraph 0056).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to in addition to the method taught by Scholefield to determine and

assign departure times relating to different receiving nodes, detect conflict, and reassign

assigned departure times as described above to "reserve time slots to IRs for collision-

free broadcast transmissions over a common broadcast channel in such a way that an

upper bound is ensured for the time elapsed between two time slots assigned to a given

IR in the system".

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Scholefield et al. (U.S. 5,742,592, herein "Scholefield") in view of Garcia-Luna-Aceves

(U.S. 2002/0167960 A1, herein "Garcia") as applied to claim 1 above, and further in

view of Peterson (U.S. 6,301,262 B1).

Regarding claim 2, Scholefield teaches in at least one instance of the recurrent

cycle at the sending node, transmitting a burst via the designated subchannels within

the recurrent cycle (column 4, lines 43-46), but does not teach determining at least one

time at which bursts need to depart in order to arrive at the receiving node within a

selected timeslot, and transmitting a burst at least at one of the times that have been

determined. Peterson, which is in the same field of endeavor, teaches determining at

least one time at which bursts need to depart in order to arrive at the receiving node

within a selected timeslot (column 6, lines 14-24; "determines if a time slot exists in

which a message may be injected ... so that it may be received ... at a time when the

requested resources are receptive to receiving"), and transmitting a burst at least at one

of the times that have been determined (column 6, lines 14-24; "a message may be

injected") for the purpose of solving the problem of propagation time due to distance

between communications resources (column 2, lines 6-18).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to in addition to the method taught by Scholefield, determine at

least one time at which bursts need to depart in order to arrive at the receiving node within a selected timeslot, and transmit a burst at least at one of the times that have been determined to solve the problem of propagation time due to distance between communications resources.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (U.S. 5,742,592, herein "Scholefield") in view of Garcia-Luna-Aceves (U.S. 2002/0167960 A1, herein "Garcia") as applied to claim 1 above, and further in view of Padovani et al. (U.S. 6,574,211 B2, herein "Padovani") and Dail et al. (U.S. 5,570,355, herein "Dail").

Regarding claim 3, Scholefield teaches detecting an idle period (column 6, lines 50-51), but does not teach detecting non-receipt of a scheduled burst at the receiving side; selecting a timeslot in substitution for the timeslot of the non-received burst; and communicating the selected substitute timeslot to the sending node.

Padovani, which is in the same field of endeavor, teaches detecting non-receipt of a scheduled burst at the receiving side (column 15, lines 36-40; "missing data units are considered as though received in error") for the purpose of then transmitting NACK messages corresponding to the missing data units.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield, detect non-receipt of a scheduled burst at the receiving side to then transmit a NACK message corresponding to the missing data units.

Dail, which is in the same field of endeavor, teaches selecting a timeslot in substitution for the timeslot of the non-received burst (column 3, lines 65-67; column 4, lines 1-4; "a 'hole' … is taken account of by 'repacking', which refers to reallocation of time slots to existing calls"); and communicating the selected substitute timeslot to the sending node (column 4, lines 13-17; "stations are notified of the new … time slot allocations by sending messages") for the purpose of adapting to the changing demands of a mix of STM and ATM applications (column 2, lines 53-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield and modified by Padovani to select a timeslot in substitution for the timeslot of the non-received burst, and communicate the selected substitute timeslot to the sending node to adapt to the changing demands of a mix of STM and ATM applications.

Regarding claim 4, Scholefield teaches deferring completion of a first data transfer for a higher priority data transfer (column 5, lines 47-54), but does not teach the selection of a substitute timeslot. Dail teaches selecting a substitute timeslot that has already been scheduled as in the instant invention alternative (column 4, lines 1-2; "reallocation of time slots to existing STM calls") for the purpose of adapting to the changing demands of a mix of STM and ATM applications.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield and modified by Padovani and Dail to select a substitute timeslot that has already been scheduled to adapt to the changing demands of a mix of STM and ATM applications.

Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (U.S. 5,742,592, herein "Scholefield") in view of Garcia-Luna-Aceves (U.S. 2002/0167960 A1, herein "Garcia") as applied to claim 5 above, and further in view of Cain (U.S. 2003/0193908 A1).

Scholefield as modified by Garcia teaches the reassigning step, but does not teach the reassigning step is conditional on the outcome of a step of deciding whether or not to reassign. Cain, which is in the same field of endeavor, teaches the reassigning step is conditional on the outcome of step of deciding whether or not to reassign (paragraph 0045; "may be reassigned to another communication link based on link demand") for the purpose of "accommodating variations in communication link demands".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield and modified by Garcia to have the reassigning step conditional on the outcome of a step of deciding whether or not to reassign to accommodate variations in communication link demands.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rogers (U.S. 2005/0094642 A1) teaches an endpoint packet scheduling system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Weidner whose telephone number is (571) 270-

1825. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Charles Garber can be reached on (571) 272-2194. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJW